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ABSTRACT

Noting the lack of a comprehensive body of knowledge about Asian American educational achievement and attainment, this document examines recent national data in order to develop an empirical profile of the educational status of Asian American secondary and postsecondary students. According to the data, higher proportions of Asian Americans than of Whites are enrolled in school between the ages of 3 and 34. And Asian American students score higher on mathematics tests than White students and lower on tests of verbal skills, science, and analytical skills. It is argued that, while the average Asian American student does appear to be doing well, those who are recent immigrants or whose best language is not English may be experiencing problems, and that attention to their needs is warranted. Three factors are identified as accounting for the trends in the data: U.S. immigration and refugee policies; the time spent on learning by Asian American students; and historical labor market discrimination and Asian American sensitivity to job openings under equal employment opportunity conditions. None of the three factors is regarded as being endemic to Asian Americans; all are seen as having implications for the schooling of other students. It is concluded that there is an urgent need for current information on the educational status of specific groups of Asian American students whether by ethnicity, nativity, length of U.S. residence, geographical location, grade level, or school. (RDN)

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# BEYOND ANGEL ISLAND:

# THE EDUCATION OF ASIAN AMERICANS

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and

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## INTRODUCTION

Asian Americans are the fastest growing minority group in the United States. However, in efforts to advance educational equity and quality for minorities, few researchers or policy analysts have systematically examined the schooling of Asian American students.

Two factors may have contributed to this lack of interest. First, Asian Americans have been considered a numerically insignificant demographic group, and research and policy agendas have given priority to other students. Second, the long held popular perception of Asian Americans has been that they excel in school. This perceived success, fostered in large part by the mass media, has been attributed to endemic factors such as I.Q. and Asian culture. Consequently, two assumptions have been made: 1) Asian Americans have no educational problems that need remediation; and 2) the search for ways to improve the educational system will not be benefitted by an understanding of Asian American students.

The lack of a comprehensive body of knowledge about Asian American educational achievement and attainment lends itself to inappropriate action (or more likely, inaction) concerning the schooling of Asian Americans on the part of policy makers. Because the Asian American population is growing dramatically, increasing by 142% between 1970 and 1980, inattention to their educational status may have adverse consequences for many students.

In addition, failure to investigate the education of Asian Americans is a failure to tap information which may benefit our understanding of American education and how it might be changed for the betterment of all students. Somewhat ironically, business and educational leaders have looked instead to the schooling of students in Japan and other countries for sources of enlightenment in assessing the condition of the American school system.

Within this context, we examine recent national data in order to develop an empirical profile of the educational status of Asian American secondary and postsecondary students. While the average Asian American student does appear to be doing well, those who are recent immigrants or whose best language is not English may be experiencing problems. Attention to the needs of these students is warranted. We identify three factors which account for the trends in the data: U.S. immigration and refugee policies; the time spent on learning by Asian American students; and historical labor market discrimination and Asian American sensitivity to job openings under equal employment opportunity conditions. None of the factors is endemic to Asian Americans; they all may have implications for the schooling of other students.

The paper is organized in four parts. Part I gives demographic background information and Part II describes statistics on Asian American high school, undergraduate, and graduate students. Part III consists of a discussion, and Part IV is a conclusion with policy recommendations.

## PART I: DEMOGRAPHIC BACKGROUND

The Asian American population is a rapidly growing, predominantly immigrant, and urban population. It is also remarkably diverse.

Unless otherwise noted, the data in this section are from the 1980 Census (Bureau of the Census, 1981, 1983a, 1983b, 1984). The Census Bureau uses the racial designation of Asian and Pacific Islander (API), and disaggregated data for Asian Americans are not available for many categories of information cited in this part. In those cases, the reader must adjust the figures downward by six percent, to subtract the population of Pacific Islanders from the total API population.

The 1980 population of Asian Americans was 3.7 million (Table I-1). This number is 142% higher than in 1970 (Table I-2). In comparison, the respective growth rates of the black and Hispanic populations were 17.3% and 61%.

Most of the Asian American increase is attributable to the influx of immigrants and refugees (Table I-3).[2] For example, the population of Korean Americans grew 413% between 1970 and 1980; and 95% of the increase was due to immigration. The 1965 relaxation of exclusionary immigration policies directed towards Asians since 1882 accounts for the increase of newcomers. In the 1950s, only 6% of the immigrants admitted to the United States were from Asian countries (Immigration and Naturalization Service, 1980), while by 1980 the percentage had grown to 44.5%.

As a consequence of immigration, 59% (2,182,639) of Asian Americans are foreign-born. In addition, approximately two-thirds appear to speak an Asian language at home (Table I-4). Of those age five or older with an Asian home language, about one-fifth may be limited English proficient.

Sixty-four percent of the Asian American population resides in the states of California, Hawaii, and New York (Figure I.1), with high concentrations in large urban areas (Table I-5). Over 1.5 million Asian Americans reside in four standard metropolitan statistical areas alone: Los Angeles/Long Beach, San Francisco/Oakland, New York City, and Honolulu. Within these areas, Asian Americans constitute significant proportions of the populations of cities; in San Francisco, for example, Asian Americans are the largest minority group, accounting for 22% of the 1980 population.

Historically, men greatly outnumbered women among the Asian American population, and there were few children. Presently, 52% of Asian Americans are women; and 34% of the Asian American population is 19 years old or younger (Table I-6).

Asian Americans are a remarkably heterogeneous population, consisting of Chinese, Filipinos, Japanese, Asian Indians, Koreans, Vietnamese, Laotians, Thai, Cambodians, and others. In addition to ethnicity, they differ by nativity, language, culture, history, and other key dimensions.

Three examples illustrate this point: (1) While the majority of Asian Americans are foreign-born, 72% of Japanese Americans are native-born. The average Japanese American, unlike the average Asian American, speaks English as his or her native language. (2) Among foreign-born Asian Americans, some, recently arrived Filipinos for example, are from middle class, urban, and professional backgrounds. Others, including Laotian refugees, are from preindustrial, rural, and preliterate backgrounds. (3) Few Indochinese lived in this country prior to 1975. By 1980, 686,100 had arrived as refugees (Immigration and Naturalization Service, 1980). More than one-fourth of the Chinese American population arrived in the same time period, but others are descendants of families who have lived in this country since the mid-19th century.

The growth and diversity of the Asian American population represent a challenge to educators. Due to immigration, school enrollments of Asian Americans are increasing, and on-going policies and programs must be reevaluated for their appropriateness to these new students. The future development of educational agendas must include precise definitions of the Asian American student population(s) who will be affected and assessments of their specific needs.

Table I-1: 1980 Population of Asians and Pacific Islanders (APIs)

| | Total | Foreign Born | |
|---|---|---|---|
| | | Number | % |
| | 3,726,440 | 2,182,639 | 59 |
| Chinese | 812,178 | 514,389 | 63 |
| Filipino | 781,894 | 505,504 | 65 |
| Japanese | 716,331 | 203,338 | 28 |
| Asian Indian | 387,223 | 272,617 | 70 |
| Korean | 357,393 | 292,573 | 82 |
| Vietnamese | 245,025 | 221,649 | 90 |
| Hawaiian | 172,346 | 2,812 | 02 |
| Samoan | 39,520 | 14,082 | 36 |
| Guamanian | 30,695 | 2,919 | 10 |
| Other | 183,835 | 152,756 | 83 |

Source: Census Bureau (1983b)

---

Table I-2: Increase in Population, 1970-1980

| | | | Increase | |
|---|---|---|---|---|
| | 1970 | 1980 | Number | % |
| Total | 1,538,721 | 3,726,440 | 2,187,719 | 142 |
| Chinese | 435,062 | 812,178 | 377,116 | 87 |
| Filipino | 343,060 | 781,894 | 438,834 | 128 |
| Japanese | 591,290 | 716,331 | 125,041 | 21 |
| Korean | 69,130 | 357,393 | 288,263 | 417 |
| Hawaiian | 100,179 | 172,346 | 72,167 | 72 |

Source: Census Bureau (1981, 1983b)

---

Table I-3: Immigrants Admitted to U.S. by Country or Place of Birth, 7/1/1970-9/30/1980

| | |
|---|---|
| China | 202,522 |
| Hong Kong | 47,502 |
| India | 176,758 |
| Japan | 47,914 |
| Korea | 271,956 |
| Laos[1] | 22,566 |
| Philippines | 360,216 |
| Thailand | 44,055 |
| Vietnam[2] | 179,681 |

1. 21,904 Laotians were admitted between 10/1/77 and 9/30/80.
2. 154,572 Vietnamese were admitted between 10/1/77 and 9/30/80.

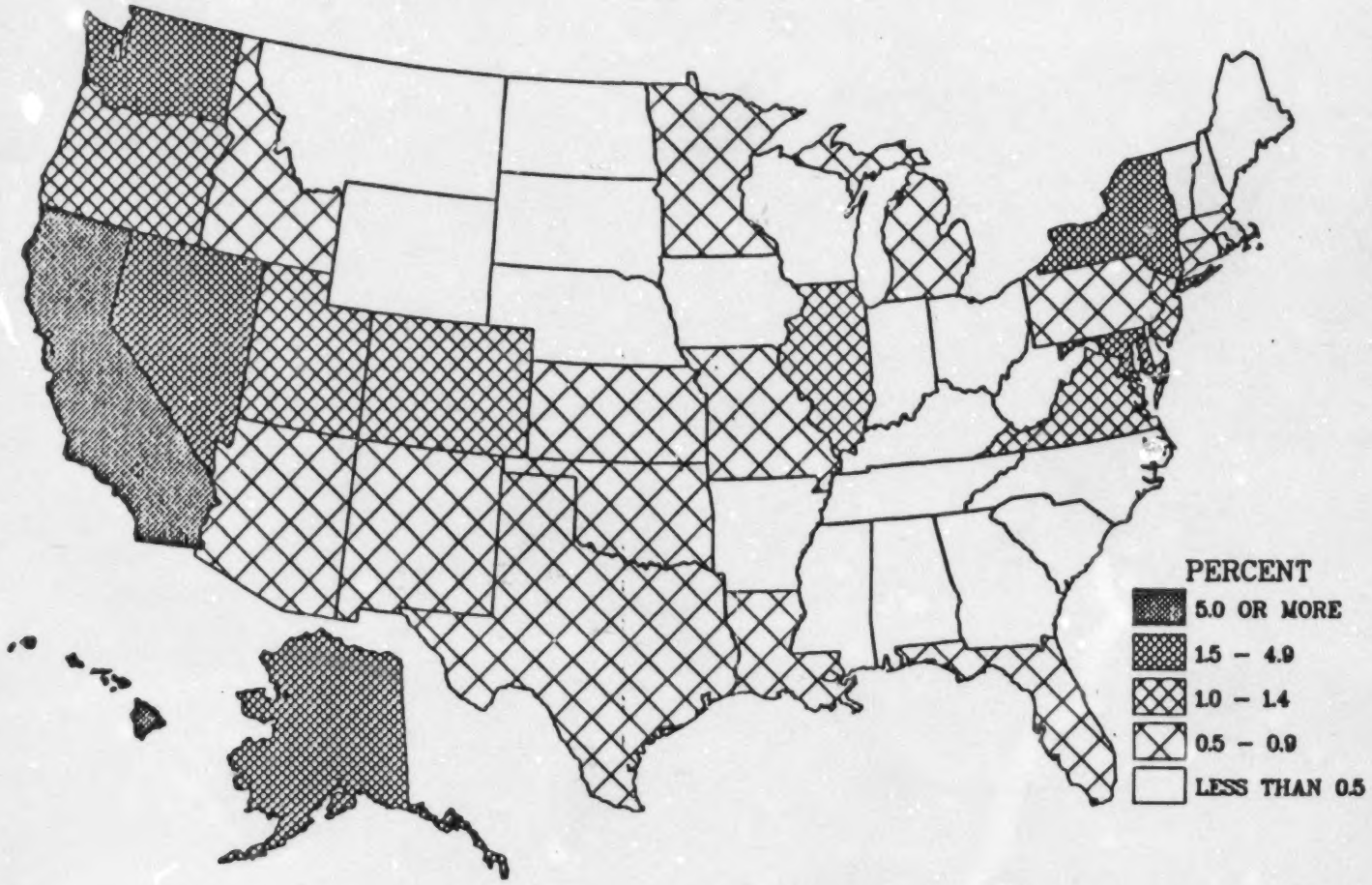
Source: Immigration and Naturalization Service (1980)

Table I-4: Number with Asian Home Languages and English Proficiency in 1980

| | Age under 5 by language of parent | Age 5 and older | | | | |
|---|---|---|---|---|---|---|
| | | total | who speak English | | | |
| | | | very well | well | not well | not at all |
| Asian Indian languages | 41,148 | 243,402 | 167,634 | 55,377 | 16,292 | 4,099 |
| Chinese | 57,597 | 630,806 | 253,059 | 190,653 | 131,246 | 55,848 |
| Japanese | 26,392 | 336,318 | 161,238 | 109,428 | 58,245 | 7,407 |
| Korean | 39,897 | 266,280 | 90,157 | 99,145 | 63,955 | 13,023 |
| Philippine languages | 69,595 | 474,150 | 274,235 | 155,837 | 39,504 | 4,574 |
| Thai | 17,000 | 84,961 | 24,357 | 30,407 | 21,513 | 8,684 |
| Vietnamese | 26,746 | 194,588 | 47,643 | 73,414 | 57,023 | 16,508 |
| Total | 278,375 | 2,230,505 | 1,018,323 | 714,261 | 387,778 | 110,143 |

Source: Census Bureau (1984)

Figure I-1: 1980 Geographic Distribution of APIs




Prepared by: ASPE Computer Center; for: Division of Asian American Affairs, Office of the Assistant Secretary for Planning and Evaluation, DHHS, 1982.

Based on: PC80-S1-3, Race of the Population by States: 1980, Bureau of the Census, 1981.

Table I-5: APIs in SMSAs with More than 10,000 APIs in 1980

| SMSA | Total APIs | Foreign born | 5-17 year olds |
|---|---|---|---|
| Honolulu, HI | 463,117 | 97,331 | 99,783 |
| Los Angeles/Long Beach, CA | 456,693 | 285,837 | 91,630 |
| San Francisco/Oakland, CA | 335,689 | 206,225 | 65,158 |
| New York, NY/NJ | 287,534 | 222,486 | 57,875 |
| Chicago, IL | 150,846 | 110,114 | 31,418 |
| San Jose, CA | 101,922 | 43,843 | 21,578 |
| San Diego, CA | 95,090 | 58,424 | 23,195 |
| Anaheim/Santa Ana/Garden Grove, CA | 93,491 | 58,014 | 23,530 |
| Washington, DC/MD/VA | 87,037 | 65,353 | 19,980 |
| Seattle/Everett, WA | 68,262 | 39,616 | 14,056 |
| Houston, TX | 55,147 | 43,395 | 12,383 |
| Philadelphia, PA/NJ | 49,370 | 35,800 | 11,603 |
| Sacramento, CA | 47,393 | 21,004 | 9,397 |
| Boston, MA | 39,027 | 27,493 | 7,337 |
| Detroit, MI | 35,200 | 24,188 | 7,784 |
| Dallas/Fort Worth, TX | 28,735 | 21,777 | 6,572 |
| Portland, OR/WA | 27,801 | 17,599 | 6,333 |
| Newark, NJ | 27,766 | 19,928 | 5,879 |
| Riverside/San Bernadino/Ontario, CA | 26,829 | 15,829 | 5,984 |
| Nassau/Suffolk, NY | 25,848 | 17,725 | 6,648 |
| Minneapolis/St. Paul, MN/WI | 24,552 | 18,990 | 6,812 |
| Denver/Boulder, CO | 24,165 | 13,417 | 5,284 |
| Stockton, CA | 21,738 | 10,905 | 4,580 |
| Salinas/Seaside/Monterey, CA | 20,362 | 11,407 | 4,391 |
| Vallejo/Fairfield/Napa, CA | 20,168 | 11,151 | 4,863 |
| Jersey City, NJ | 16,167 | 13,153 | 3,189 |
| Tacoma, WA | 16,158 | 9,870 | 3,322 |
| Phoenix, AZ | 16,015 | 8,439 | 3,215 |
| Oxnard/Simi Valley/Ventura, CA | 15,751 | 8,572 | 3,826 |
| Salt Lake/Ogden, UT | 15,717 | 8,612 | 3,757 |
| Norfolk/Virginia Beach/Portsmouth, VA/NC | 15,598 | 10,121 | 4,187 |
| Fresno, CA | 15,466 | 6,409 | 2,722 |
| Cleveland, OH | 14,253 | 9,658 | 2,940 |
| Miami, FL | 14,069 | 10,753 | 2,740 |
| St. Louis, MO/IL | 14,017 | 9,521 | 3,369 |
| New Brunswick/Perth Amboy/Sayreville, NJ | 12,806 | 9,458 | 2,815 |
| Atlanta, GA | 12,529 | 9,453 | 2,820 |
| TOTAL | 2,792,528 | 1,611,870 | 592,955 |

Source: Bureau of Census (1983a)

Table I-6: 1980 Age Distribution

| | Total | Under 5 | 5-19 | 20-44 | 45-64 | over 64 | Median |
|---|---|---|---|---|---|---|---|
| APIs | | | | | | | |
| Chinese | 812,178 | 57,763 | 180,445 | 371,015 | 146,694 | 56,261 | 29.6 |
| Filipino | 781,894 | 70,171 | 205,178 | 344,900 | 105,644 | 56,001 | 28.5 |
| Indian | 387,223 | 42,815 | 81.260 | 193,226 | 38,918 | 31,004 | 30.1 |
| Japanese | 716,331 | 37,588 | 135,722 | 297,575 | 193,345 | 52,101 | 33.5 |
| Korean | 357,393 | 37,708 | 104,843 | 168,773 | 37,456 | 8,613 | 26.0 |
| Vietnamese | 245,025 | 24,550 | 89,349 | 106,935 | 19,606 | 4,585 | 21.5 |
| Guamanian | 30,695 | 2,808 | 10,014 | 14,169 | 2,973 | 731 | 22.6 |
| Hawaiian | 172,346 | 17,152 | 53,123 | 67,171 | 25,263 | 9,637 | 24.2 |
| Samoan | 39,520 | 5,567 | 14,902 | 14,940 | 3,300 | 811 | 19.2 |
| Other | 183,835 | 24,126 | 54,459 | 92,248 | 11,237 | 1,765 | 23.2 |
| Total APIs | 3,726,440 | 320,248 | 929,295 | 1,670,952 | 584,436 | 221,509 | 28.4 |
| % | 100 | 9 | 25 | 45 | 16 | 6 | |
| Whites | 189,035,012 | 12,700,693 | 44,679,689 | 69,801,519 | 38,911,541 | 22,941,570 | 30.0 |
| % | 100 | 7 | 24 | 37 | 21 | 11 | |

Source: Bureau of the Census (1984)

## PART II: EDUCATIONAL CHARACTERISTICS

The descriptive statistics on Asian American secondary and postsecondary students presented here are divided into seven sections: (1) school, program, and college enrollment; (2) high school achievement; (3) college preparation; (4) undergraduate fields of study; (5) preparation for graduate school; (6) graduate fields of study; and (7) overall educational attainment.

### The Data Bases

In order to secure information which is representative of the present Asian American population, a search for papers, reports, and other publications describing analyses of the most current national data was conducted. National data on Asian Americans are scarce. For example, the National Assessment of Educational Progress collects data on whites, blacks, and Hispanics, but not Asian Americans. However, references for six relevant data bases were found, in addition to the 1980 Census of Population. These data bases were established in 1978 or later, and all together offer descriptive data about high school, undergraduate, and graduate students. Five of the data bases utilized the Census Bureau descriptor of Asian and Pacific Islander as a racial group and did not collect data by ethnicity for this population. As noted in Part I, Pacific Islanders are only six percent of the total Asian and Pacific Islander population; therefore, the figures reported for Asian and Pacific Islanders are good estimates of the numbers for Asian Americans alone. Since relatively few Pacific Islander students go on to college, the postsecondary figures even more closely approximate the statistics for Asian American students. In our statistical tables, we use the race descriptors of the various data bases. However, in our narrative, we continue to limit our comments to Asian American students.

Most of the available data have serious limitations, which are made explicit in the following descriptions.

Elementary and Secondary School Civil Rights Survey. This survey was conducted during the fall of 1980, under the auspices of the Office of Civil Rights, U.S. Department of Education. The purpose was to obtain data on the characteristics of students enrolled in public schools. Two forms were administered, one to collect data from approximately 5,000 school districts and the other to survey approximately 51,000 schools. The "Asian and Pacific Islander" identifier was used. We have drawn upon the civil rights survey report issued by the DBS Corporation (1982). The report does not disaggregate data by level of schooling, and therefore differences between elementary and secondary student characteristics and the programs provided to them are not reflected. The Office of Civil Rights used the data to estimate national figures. These figures are not consistent with census statistics.

High School and Beyond. High School and Beyond is a longitudinal study being conducted by the National Center for Education Statistics, U.S. Department of Education. The sample consists of 30,000 students who were sophomores and 25,000 who were seniors during 1980, the base year for data collection. Questionnaires and a test battery were administered to the students; a follow-up survey of the same cohorts was conducted in 1982, and additional follow-ups are planned. High School and Beyond uses the descriptor "Asian or Pacific Islander." We have relied on an analysis of the survey data by Peng et al. (1984).

High School and Beyond has data on 688 Asian or Pacific Islander students. Although these cases are considered representative of the overall population of such students, the small number means the data are probably not appropriate for studies of specific ethnic groups. Since the High School and Beyond study has and will continue to collect a rich variety of information for educational policy research, the small sample of APIs is unfortunate.

Scholastic Aptitude Test (SAT). Since 1980, the College Entrance Examination Board has compiled and released annual reports on SAT scores and SAT candidates. The information about the candidates is gathered through a Student Descriptive Questionnaire which is part of the SAT registration form. The College Entrance Examination Board uses the racial category of "Asian/Pacific Americans." We have relied on reports by Ramist and Arbeiter (1984) who analyzed the 1982-83 questionnaire data and SAT scores of 1,012,537 students.

A major problem with the manner in which the College Entrance Examination Board compiles data is its confounding of information obtained from foreign students with that obtained from Asian Americans. In 1982-1983, SAT candidates in foreign countries numbered 3,719 (10%) of the total of 36,781 candidates labelled as Asian Americans by the College Board. This mixing of foreign students with immigrant and native-born students in American high schools is an important limitation on the usefulness of the Asian American SAT data.

Bachelor's and Professional Degrees. The National Center for Education Statistics, U.S. Department of Education, collected racial, ethnic, and sex data about those who received degrees and other awards between July 1, 1978 and June 30, 1979 from institutions of higher education receiving federal financial assistance. The identifier "Asian or Pacific Islander" was used. The colleges were instructed to report information about "non-resident aliens" separately from the racial categories. Thus, unlike the SAT data, these figures are not flawed by foreign student information. The data are reported institution by institution. The information presented in this paper was extracted from a massive report by the Office for Civil Rights, U.S. Department of Education (1981).

Graduate Record Examination (GRE). The Educational Testing Service (ETS) asks GRE takers a set of background questions as part of the test registration form. ETS uses the term "Oriental or Asian-American" when

collecting data. This paper relies on Goodison (1983), who compiled a report on the 1981-1982 testing year, describing approximately 181,000 people who took the GRE for the first time that year.

A limitation of the report is the exclusion of GRE takers who were not American citizens in the racial/ethnic cross tabulations. The use of this procedure means that immigrants who had not yet been naturalized are not represented. In 1981-1982, 6,362 (approximately 3.56%) of the GRE takers were not citizens, and the effect of their exclusion on the validity of the figures for Asian Americans may be considerable.

Survey of Doctorate Recipients. The National Research Council conducted a survey of recipients of doctorates earned between July 1, 1978 and June 30, 1979 (recipients of professional degrees were not included in the survey). Questionnaires, distributed with the cooperation of graduate deans, were filled out by students as they completed the final requirements for their doctoral degrees. "Asian or Pacific Islander" was used as the racial identifier. The data are separated according to the following categories: American citizens, permanent residents, and students on temporary visas. Permanent residents are immigrants who have not yet naturalized, and students on temporary visas are foreign students. This paper relies on the 1980 report of the National Research Council.

## Educational Characteristics

School, Program, and College Enrollment. Census statistics from 1980 indicate that high percentages of Asian American children between the ages of three and six were enrolled in school (Table II-1). In fact, with the exception of the Filipino American participation rate, the figures for Asian American children are markedly higher than those for white children. The largest difference is between Japanese and white three- and four-year-olds. Fifty-eight percent of the Japanese children were enrolled in school, compared to 32% of the white children.

The implications of these figures are difficult to determine. Relatively more Asian American families may have two working parents who place their preschool children in nursery school facilities. The kindergarten figures may be reflective of the tendency of Asian Americans to live in states where schooling at this level is routinely provided by the public school system. It is not known whether the higher percentages of young Asian American children enrolled in school result in an educational "head start" with long term benefits extending into high school and college.

Table II-1 also indicates that 96.5% to 99.1% of Asian Americans between the ages of seven and 15 were enrolled in school. The figures drop for Asian Americans between the ages of 16 and 17. The same trend is evident for white students; however, the decrease is larger. In the 16- and 17-year-old age group, higher proportions of Asian Americans compared to whites were in school.

The 1980 Elementary and Secondary School Civil Rights Survey data on expulsions, suspensions, and corporal punishment suggest that Asian American students were less likely to present disciplinary problems than white students (Table II-2). Asian American students were also less likely to be enrolled in programs for students with learning difficulties. While 5.25% of Asian Americans were enrolled in programs for the gifted and talented, 2.88% of their white counterparts were participating in such programs. A substantially larger proportion of Asian Americans, 15.43%, was enrolled in programs for the limited English proficient (LEP); only 0.17% of whites were students in such programs. The need for special language programs appears to represent the greatest difference between Asian American and white students.

The civil rights survey report includes unadjusted figures for the numbers of students who were identified as LEP compared to the numbers enrolled in LEP programs (Table II-3). Of the Asian American students about whom information was gathered, 18.7% were categorized as LEP; 86% of these were enrolled in special programs and 14.8% were not. This last percentage may represent a large unmet need.

A rough indication of the linguistic backgrounds of LEP Asian American students is provided by 1980 census data (Table II-4). Among children between the ages of five and 17 with Asian home languages, the most numerous by far speak Chinese. Among people age five and older with Asian home languages who may be limited English proficient, those with Chinese home languages are, again, by far the most numerous (Table I-4 in Part I).

Asian Americans of college age are much more likely to be enrolled in school than whites of the same age (Table II-1). The college enrollments of two Asian ethnic groups are distinctive. In both absolute number and percentage, many more Chinese Americans than any other Asian group appear to attend college (Table II-5). By contrast, Filipino Americans seem to be far less likely to be enrolled in college than other Asians; the proportions of college age Filipinos in school are more similar to the figures for whites than any other Asian group.

High School Achievement. The High School and Beyond test data show that the average Asian American student score was slightly higher than the average white student score in mathematics and slightly lower in verbal skills and science (Table II-6). However, the relative Asian American scores vary when they are analyzed by length of residence in the United States. Most noticeably and not surprisingly, those who have lived here for five or fewer years scored substantially lower than white students in both verbal skills and science. With a few exceptions, Asian American students who have lived here at least six years or who were born here scored at about the same level as or higher than the white students on all three tests.

As part of the first High School and Beyond follow-up survey in 1982, the achievement tests were readministered to those who were sophomores in 1980. Table II-7 shows an analysis of the improvement in test scores.

Most of the Asian American students categorized by length of residence improved their scores by the same degree as the white students. However, the recent immigrant group made substantially less progress in their verbal scores.

The High School and Beyond data suggest that: (1) Asian Americans who have resided in the United States for at least six years are doing as well as white students; and (2) recent Asian American immigrant students need special language instruction. Since special instruction for limited English proficient students has been mandated by the U.S. Supreme Court since 1974, it may be the case that the instruction the students are receiving is inadequate or inappropriate.

College Preparation. The SAT data show that in 1982-83, 33,062 out of the total of 983,474 SAT candidates attending high school in the 50 states and Washington, D.C., identified themselves as Asian Americans. This is approximately 46% of all 18-year-old Asian Americans. In comparison, the total number of SAT candidates is only 24% of the total 18-year-old population (Ramist and Arbeiter, 1984).

Table II-8 suggests that the Asian American SAT candidates were somewhat better prepared for college than candidates overall in terms of number of years of academic subjects taken in high school, median grade point average, median percentile class rank, and percentage receiving an academic honor. Compared to four percent for all students, a high 28% reported that English was not their best language. However, all these figures may be misleading due to the aforementioned number of foreign students represented in the SAT data.

Table II-9 compares the distribution of Asian American SAT scores with that of white scores. The Asian American mean verbal score was substantially lower (395 versus 443), but their mean mathematics score was substantially higher (514 versus 484). The low verbal score may be a reflection of the fact that 10% of those included in the Asian American category were foreign students for whom English was presumably not their best language. However, in Table II-10, which reports scores for students whose best language is English and for those whose best language is other than English, even the Asian American candidates who said English was their best language had a lower median verbal score (427) than the white students (439). Among Asian American students whose best language was not English, the median verbal score was substantially lower than that of the same category of white students (270 versus 360). This remarkably low median score for these students contrasts with the median mathematics score, which is the highest shown in the table.

Even if we consider the caveat about foreign student scores reflected in the sets of verbal scores described above, the figures suggest a need for greater programmatic attention to the developement of verbal skills among Asian American students. This type of attention may be required both at the secondary and postsecondary levels.

Okada (1984) tabulated differences in the SAT scores of Asian Americans and whites according to family income groups. While the racial differences in verbal scores diminished as family income increased, the differences in mathematics scores remained unchanged across income group (Table II-11). Okada found the same trend when he compared other pairs of ethnic and racial groups by test scores and family income. The implications of this finding are unclear and further investigation is warranted.

Undergraduate Fields of Study. Table II-12 indicates that the greatest number of Asian Americans received bachelor's degrees in business and management (3,177), followed in order by engineering (1,838), social sciences (1,620), biological sciences (1,463), and health professions (1,087). In comparison, the top five majors among white bachelor's degree recipients were business and management, education, social sciences, health professions, and engineering (Office for Civil Rights, 1981). For both Asian Americans and whites, business and management was by far the most popular major.

There are differences in majors by sex. The top five majors among Asian American women were business and management, health professions, social sciences, biological sciences, and education. Among white women, the top five were education, health professions, business and management, social sciences, and fine and aplied arts. Interestingly, while 41% of Asian American business and management majors were women, only 29% of whites in the same major were women. For Asian American men, the top five majors in rank order were business and management, engineering, social sciences, biological sciences, and psychology. For white males, the top majors were business and management, social sciences, engineering, education, and biological sciences.

These figures indicate that the popular notion that Asian Americans tend to major in engineering and the sciences is exaggerated. Business and management and the social sciences appear to be slightly more popular fields of study. Further, Asian Americans appear to have generally the same preferences for majors as white students. However, there are sex differences in choice of major, and the differences by sex are dissimilar for whites and Asian Americans. Asian American women appear to be less influenced by sex stereotyping in their choice of majors.

Preparation for Graduate School. In 1981-82, 1.89% (2,834) of those who took the GRE identified themselves as Asian Americans. In comparison, 3.3% of the SAT candidates identified themselves as Asian Americans. The lower proportion may be due to the fact that non-citizen immigrants were not included. Further, the GRE is not the only entrance examination for graduate admissions; professional schools in particular require that applicants take other tests. Additionally, since the job market may offer better opportunities for bachelor's degree recipients than graduate school, particularly for engineering and business administration majors, some students simply don't take the GRE.

Table II-13 summarizes the characteristics of the Asian American GRE takers and their test scores. Roughly half were women (49.66%). About 14% indicated English was not their best language. Physical sciences was the undergraduate field of study for 34.40% of those who took the examination, and the field of intended graduate study for 30.83%. However, 30.89% and 28.97% listed social sciences as their respective past and future areas of academic concentration. In comparison, the majority (56.96%) of whites who took the GRE were men, and more than 40% of them had social science backgrounds and intended to pursue graduate study in the same field.

Asian Americans scored higher on the quantitative portion of the GRE but lower on the verbal and analytical subtests than whites. The relatively lower scores may be attributable to the GRE takers whose best language was other than English.

Graduate Fields of Study. The National Research Council survey indicates there were only 424 U.S. citizens and 673 permanent residents among the total of 2,593 Asian non-professional doctorate recipients in 1978-1979 (Table II-14). The remaining 1,457 (56%) were holders of temporary visas. That is, the majority of Asian students pursuing non-professional doctoral degrees at American universities appear to be foreign students. Excluding foreign students, Asian Americans comprised approximately four percent of all doctoral recipients.

The overwhelming majority of all three categories of Asians were men. In fact, among all racial/ethnic groups, Asians had the lowest proportion of women doctorate recipients (17%). (Hispanics had the next lowest proportion with 24.4%.) The low number of Asian women who received doctorates in 1978-1979 is interesting in view of the previously mentioned fact that half of the Asian American GRE takers in 1981-1982 were women.

In the National Research Council data, Asians who were U.S. citizens had more doctorates in life sciences than in other subject areas, and were also more evenly distributed across the various doctoral fields than the permanent residents and foreign students. For these latter two groups, engineering was the most preferred field. By contrast, the largest proportion (23.6%) of total U.S. doctoral students earned their degrees in education. All three groups of Asians, especially the permanent residents, had much smaller proportions earning doctorates in this field.

While 1,097 Asian Americans (citizens and immigrants) received non-professional doctoral degrees in 1978-1979, 1,160 earned professional degrees (Table II-15). Sixty-nine percent specialized in law and medicine, with the largest number (390) earning law degrees. The majority of whites also earned professional degrees in these two fields (Office of Civil Rights, 1981).

Compared to 827 Asian American men who received professional degrees, only 333 Asian American women did so. However, like the men, the overwhelming majority of the women specialized in law and medicine.

Asian Americans were greatly overrepresented among those earning pharmacy degrees. Although Asian Americans were approximately 1.5% of the total 1980 U.S. population, they were 17.5% of the total degree recipients in this field. Asian Americans were also somewhat overrepresented among those who received degrees in dentistry and medicine.

Overall Educational Attainment. The 1980 census figures indicate that Asian American men and women, with the exception of the Vietnamese, are much more likely to be college graduates than white men and women (Table II-16). However, except for Filipinos, Asian American women are less likely to be college graduates then men. Because of the tendency to go on to college, lower proportions of Asian Americans compared to whites terminate their educations during high school. About the same percentages of Asian American women and men and white women and men appear to have eight or fewer years of schooling; the respective figures are 19%, 13%, 16%, and 17%.

These educatioanl attainment figures are consistent with the data on Asian American SAT candidates, GRE candidates, and degree recipients described above. However, it must be noted again that the majority of Asian Americans are immigrants and many complete their schooling before coming to the United States. Among Asian Americans 25 years and older who came to this country between 1970 and 1980, 28% of the Chinese, 32% of the Koreans, and 48% of the Filipinos arrived with four years of college
education (Bureau of the Census, 1984).

## Summary

Higher proportions of Asian Americans from the age of three to the age of 34 are enrolled in school compared to whites. The most noticeable differences are among the very young and those of college age. Asian Americans appear to start their educations relatively early in life and continue in school until relatively late in life.

Asian American students do not appear to pose problems of disruption in school. In terms of special education, they are more likely to be in gifted and talented programs than programs for those with learning disabilities. However, a substantial proportion of those who are limited English proficient are not receiving any language assistance.

Addressing the English proficiency of Asian American students is a matter of major concern. The number who are limited English proficient combined with the number who experience English problems may be large, not only in secondary schools but also in institutions of higher education. While their educational attainment does not seem to be reduced, the academic achievement of many, as indicated by test scores, appears to be adversely affected by language problems.

Asian American students score higher on mathematics tests than white students and lower on tests of verbal skills, science, and analytical

skills. The relatively low verbal test scores may be related to the scores on science and analytical tests since, presumably, the items on these types of tests require a certain level of English comprehension. Concerning verbal achievemant, the High School and Beyond data on test scores and improvement in test scores suggest that recent immigrants who have lived in the United States five years or less are most in need of educational intervention programs. High proportions of Asian Americans who take the SAT and GRE report that English is not their best language. These students may also be recent immigrants. Further, the distributions of the Asian American scores on the High School and Beyond tests, the SAT, and the GRE indicate that the standard deviations are, with a few exceptions, higher than those for white students. This trend suggests there are proportionately more Asian American students with low scores as well as proportionately more with high scores. This phenomenon may also be linked to recency of immigration and related English language difficulties.

An extraordinarily high proportion of Asian Americans take the SAT for college entrance, while a far lower percentage of white students are SAT candidates. As college students, Asian Americans choose business and management, engineering, social sciences, and biological sciences as majors. Their preferences are generally similar to those of whites. Compared to undergraduate education, graduate study seems to attract proportionately fewer Asian Americans. Among those who take the GRE, men and women seem to be represented equally; however, mainly men go on to the professional and doctoral degree level. Law and medicine are the most frequently studied professional fields, and both whites and Asians appear to specialize in these fields in similar proportions. Among Asian American doctorate recipients, science and engineering seem to be favored. Their white counterparts are much more varied in their choices of doctoral fields.

Twenty-seven percent of female Asian American adults, and 39.8% of males are college graduates. Much lower percentages of the white male and female adult populations have this much education. These educational attainment data reflect the fact that many Asian Americans are immigrants who received their college educations in their countries of origin.

Major weaknesses underlie these generalizations, primarily because many of the data sets are imperfect. Ten percent of the SAT data pertain to foreign students, and the GRE data do not include non-citizen Asian immigrants. The flawed SAT data are of particular concern as they have been widely publicized. Further, the collection of national data on Asian Americans by ethnicity, English as one's best language, and length of residence in the United States is not standard practice. Analyses of Asian American educational characteristics according to these variables would be much more revealing and meaningful from programmatic and policy perspectives.

Table II-1: Percentages Enrolled in School and College in 1980

| | 3-4 years old | 5-6 years old | 7-15 years old | 16-17 years old | 18-19 years old | 20-21 years old | 22-24 years old | 25-34 years old |
|---|---|---|---|---|---|---|---|---|
| Asians | | | | | | | | |
| Chinese | 47.9 | 91.4 | 98.4 | 96.0 | 83.9 | 74.0 | 50.7 | 21.9 |
| Filipino | 27.6 | 89.1 | 98.8 | 92.8 | 62.7 | 38.3 | 20.2 | 9.6 |
| Indian | 51.4 | 92.3 | 98.2 | 92.2 | 72.0 | 54.3 | 39.2 | 14.8 |
| Japanese | 58.0 | 94.6 | 99.1 | 96.2 | 77.0 | 61.6 | 38.9 | 14.6 |
| Korean | 42.1 | 88.4 | 98.3 | 94.9 | 77.7 | 54.8 | 30.5 | 13.2 |
| Vietnamese | 29.4 | 83.6 | 96.5 | 90.2 | 66.6 | 47.5 | 37.8 | 22.4 |
| White | 32.0 | 86.1 | 98.8 | 89.0 | 52.8 | 33.3 | 17.4 | 8.5 |

Source: Bureau of Census (1983b)

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Table II-2: Projected National Figures on Elementary and Secondary School Students in Public Schools, Fall 1980

| | APIs | | Whites | |
|---|---|---|---|---|
| | Number | % | Number | % |
| Enrollment | 749003 | 100.00 | 29180415 | 100.00 |
| Expulsions | 373 | .05 | 95969 | .33 |
| Suspensions | 12277 | 1.64 | 1319044 | 4.52 |
| Corporal Punishment | 2654 | .35 | 901032 | 3.09 |
| Enrolled in program for | | | | |
| gifted/talented | 39310 | 5.25 | 840424 | 2.88 |
| educable mentally retarded | 2277 | .30 | 308731 | 1.06 |
| trainable mentally retarded | 1120 | .15 | 59377 | .20 |
| speech impaired | 13704 | 1.83 | 687857 | 2.36 |
| seriously emotionally disturbed | 708 | .09 | 122782 | .42 |
| specific learning disabled | 10674 | 1.43 | 934069 | 3.20 |
| limited English proficient | 115604 | 15.43 | 49647 | .17 |

* The enrollment figure for APIs is 6% higher than the comparable figure calculated by the Census Bureau (1983b).

Source: DBS Corporation (1982)

Table II-3: Unadjusted Figures for API Limited English Proficient, Fall 1980

| | Number |
|---|---|
| Sample Size | 638085 |
| Number of LEP | 119634 |
| Enrolled in LEP Program | 102709 |

Source: DBS Corporation (1982)

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Table II-4: Individuals by Asian Home Languages, Ages 5-17, 1980

| Home Language | Ages 5-17 |
|---|---|
| Asian Indian languages | 43,882 |
| Chinese | 114,450 |
| Japanese | 33,671 |
| Korean | 59,766 |
| Philippine languages | 63,189 |
| Thai | 21,527 |
| Vietnamese | 64,336 |
| Total | 400,821 |

Source: Census Bureau (1984)

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Table II-5: 1980 College Enrollment

| | |
|---|---|
| Chinese | 114,699 |
| Filipino | 54,162 |
| Asian Indian | 36,506 |
| Japanese | 75,734 |
| Korean | 30,451 |
| Vietnamese | 30,462 |
| White | 10,295,430 |

Source: Bureau of Census (1983b)

Table II-6: Average Test Scores of API and White High School and Beyond Cohorts in 1980

| API | 10th Grade Verbal (max=57) | 10th Grade Math (max=38) | 10th Grade Science (max=20) | 12th Grade Verbal (max=57) | 12th Grade Math (max=38) | 12th Grade Science (max=20) |
|---|---|---|---|---|---|---|
| Time spent in US | | | | | | |
| all or almost all life | 29.6 (13.04) | 17.4 (9.94) | 10.1 (4.65) | 33.6 (13.40) | 19.0 (11.10) | 11.3 (5.20) |
| more than 10 yrs but not all life | 30.6 (12.83) | 18.1 (10.94) | 10.1 (4.92) | 34.4 (14.89) | 17.1 (12.52) | 11.6 (4.28) |
| 6-10 yrs | 29.7 (11.84) | 16.6 (9.51) | 9.9 (3.03) | 35.4 (12.51) | 21.3 (9.74) | 11.7 (2.92) |
| 1-5 yrs | 16.3 (13.05) | 15.6 (11.27) | 6.6 (4.53) | 22.0 (14.97) | 18.7 (12.22) | 9.0 (4.86) |
| All APIs | 26.3 (14.06) | 16.8 (10.33) | 9.2 (4.71) | 30.8 (14.70) | 19.1 (11.32) | 10.8 (4.89) |
| White | 28.0 (12.29) | 15.5 (9.40) | 10.3 (4.10) | 33.4 (12.57) | 17.8 (10.01) | 11.3 (4.07) |

Note: 1/ Standard deviations are in parenthesis; 2/ (max=number) refers to the maximum possible test score.

Source: Peng et al. (1984) and personal communication with Peng.

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Table II-7: Average Percentage of Test Items Correctly Answered by Sophomore Cohort Members in 1982 that Were Incorrectly Answered in 1980

| APIs | Verbal Skills | Mathematics | Science |
|---|---|---|---|
| All or almost all life in US | 50% (18.4%) | 45% (23.0%) | 41% (21.3%) |
| More than 10 yrs but not all life | 46% (21.7%) | 41% (20.3%) | 45% (24.6%) |
| 6-10 yrs | 49% (17.5%) | 50% (23.2%) | 45% (17.1%) |
| 1-5 yrs | 39% (18.4%) | 46% (25.0%) | 41% (18.9%) |
| All APIs | 47% (19.1%) | 45% (23.5%) | 42% (20.4%) |
| Whites | 48% (17.0%) | 44% (20.8%) | 40% (21.1%) |

Note: Standard deviations are in parentheses

Source: Peng et al. (1984) and personal communication with Peng.

Table II-8: Characteristics of 1982-1983 SAT Candidates*

| | A/PAs | All Students |
|---|---|---|
| No. of yrs of academic subjects taken | 16.8 | 16.3 |
| Median grade point average | 3.2 | 3.1 |
| Median percentile rank in class | 82 | 75 |
| % receiving at least one academic honor | 61 | 57 |
| % English not best language | 28 | 4 |

*Includes foreign students.

Source: Ramist and Arbeiter (1984)

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Table II-9: Distribution of A/PA and White SAT Scores in 1982-83*

A/PAs

| Verbal | | Math |
|---|---|---|
| | 750-800 | XXX |
| X | 700-749 | XXXXXX |
| XX | 650-699 | XXXXXXXX |
| XXXX | 600-649 | XXXXXXXXXXX |
| XXXXXX | 550-599 | XXXXXXXXXXXXX |
| XXXXXXXXX | 500-549 | XXXXXXXXXXXXXX |
| XXXXXXXXXXX | 450-499 | XXXXXXXXXXXXX |
| XXXXXXXXXXXX | 400-449 | XXXXXXXXXXX |
| XXXXXXXXXXXXX | 350-399 | XXXXXXXXX |
| XXXXXXXXXXXX | 300-349 | XXXXXX |
| XXXXXXXXXXX | 250-299 | XXX |
| XXXXXXXXXXXXX | 200-249 | X |
| Mean=395 (S.D.=129) | | Mean=514 (S.D.=127) |

White

| Verbal | | Math |
|---|---|---|
| | 750-800 | X |
| X | 700-749 | XXX |
| XX | 650-699 | XXXXX |
| XXXXX | 600-649 | XXXXXXXXX |
| XXXXXXXX | 550-599 | XXXXXXXXXXX |
| XXXXXXXXXXXX | 500-549 | XXXXXXXXXXXXXXX |
| XXXXXXXXXXXXXXXXX | 450-499 | XXXXXXXXXXXXXXX |
| XXXXXXXXXXXXXXXXX | 400-449 | XXXXXXXXXXXXXX |
| XXXXXXXXXXXXXXXX | 350-399 | XXXXXXXXXXX |
| XXXXXXXXXX | 300-349 | XXXXXXX |
| XXXXX | 250-299 | XXX |
| XX | 200-249 | |
| Mean Verbal=443 (S.D.=102) | | Mean Math=484 (S.D.=114) |

* Includes foreign students

Source: Ramist and Arbeiter (1984)

Table II-10: 1982-83 SAT Scores by English as Best Language*

| | % of total | SAT-V percentile score 25th | 50th | 75th | SAT-M percentile score 25th | 50th | 75th |
|---|---|---|---|---|---|---|---|
| A/PAs | | | | | | | |
| Yes | 71.6 | | 345 | 427 | 516 | 419 | 515 | 606 |
| No | 28.4 | 221 | 270 | 343 | | 412 | 520 | 629 |
| White | | | | | | | |
| Yes | 98.2 | | 373 | 439 | 511 | 400 | 481 | 565 |
| No | 1.8 | | 300 | 360 | 426 | 357 | 443 | 533 |

* Includes foreign students

Source: Ramist and Arbeiter (1984)

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Table II-11: Differences between A/PA and White Median SAT Scores By Parental Income Interval in 1982-83*

| | VERBAL | | | MATH | | |
|---|---|---|---|---|---|---|
| | A/PA | White | A/PA - White | A/PA | White | A/PA - White |
| Under $6000 | 261 | 411 | -150 | 454 | 438 | 16 |
| $ 6000-12000 | 302 | 415 | -113 | 482 | 446 | 36 |
| $12000-18000 | 354 | 421 | -67 | 498 | 457 | 41 |
| $18000-24000 | 378 | 426 | -48 | 507 | 464 | 43 |
| $24000-30000 | 401 | 432 | -31 | 514 | 476 | 38 |
| $30000-40000 | 420 | 439 | -19 | 526 | 484 | 42 |
| $40000-50000 | 439 | 450 | -11 | 540 | 499 | 41 |
| Over $50000 | 464 | 463 | 1 | 569 | 513 | 56 |

* Includes foreign students

Source: Okada (1984)

Table II-12: 1978-79 Bachelor's Degrees Conferred on Asian or Pacific Islanders

| Major | Total | % of total degrees | Female | Male |
|---|---|---|---|---|
| Agriculture and natural resources | 324 | 1.4 | 114 | 210 |
| Architecture and environ. design | 226 | 2.4 | 58 | 168 |
| Area studies | 91 | 3.5 | 61 | 30 |
| Biological sciences | 1,463 | 3.0 | 640 | 823 |
| Business and management | 3,177 | 1.8 | 1,296 | 1,881 |
| Communication | 270 | 1.0 | 135 | 135 |
| Computer and Information | 262 | 3.0 | 91 | 171 |
| Education | 832 | .7 | 519 | 313 |
| Engineering | 1,838 | 3.0 | 215 | 1,623 |
| Fine and applied arts | 709 | 1.7 | 429 | 280 |
| Foreign languages | 208 | 1.7 | 155 | 53 |
| Health professions | 1,087 | 1.7 | 805 | 282 |
| Home economics | 384 | 2.1 | 357 | 27 |
| Law | 7 | 1.0 | 2 | 5 |
| Letters | 424 | 1.0 | 267 | 157 |
| Library Science | 107 | 1.8 | 87 | 20 |
| Mathematics | 321 | 2.7 | 153 | 168 |
| Military sciences | 1 | .7 | 0 | 1 |
| Physical sciences | 425 | 1.8 | 119 | 306 |
| Psychology | 778 | 1.8 | 479 | 299 |
| Public affairs and services | 420 | 1.1 | 211 | 209 |
| Social Sciences | 1,620 | 1.5 | 738 | 882 |
| Theology | 36 | .6 | 18 | 18 |
| Interdisciplinary studies | 566 | 1.7 | 359 | 207 |

Source: Office for Civil Rights (1981)

Table II-13: Characteristics of 1981-82 GRE Takers (US Citizens Only)

| | | Oriental or Asian | White |
|---|---|---|---|
| Number of responses | | 2823 | 129355 |
| % of female | | 49.66 | 56.96 |
| % of English best language | | 86.33 | 99.22 |
| Mean year of receipt of B.A. | | 79.12 | 78.55 |
| % in each undergraduate major: | | | |
| Humanities | | 10.67 | 16.48 |
| Social Sciences | | 30.89 | 43.48 |
| Biological Sciences | | 21.87 | 21.60 |
| Physical Sciences | | 34.40 | 15.51 |
| Others and undecided | | 2.18 | 2.93 |
| Mean age | | 25.30 | 26.65 |
| % degree objective PhD or beyond | | 40.95 | 35.87 |
| % in each graduate major: | | | |
| Humanities | | 8.43 | 12.27 |
| Social Sciences | | 28.97 | 41.91 |
| Biological Sciences | | 19.90 | 19.19 |
| Physical Sciences | | 30.83 | 13.86 |
| Other and Undecided | | 11.86 | 12.77 |
| % whose father's level of ed is: | | | |
| Did not graduate from h.s. | | 15.93 | 13.60 |
| High school graduate | | 17.90 | 21.60 |
| Beyond h.s. but not college | | 15.61 | 18.92 |
| Graduate of four-year college | | 16.41 | 16.49 |
| Beyond college but no grad. deg. | | 4.15 | 5.05 |
| Graduate or professional degree | | 30.01 | 24.34 |
| % whose mother's level of ed is: | | | |
| Did not graduate from h.s. | | 18.04 | 9.45 |
| High school graduate | | 28.98 | 32.60 |
| Beyond h.s. but not college | | 20.25 | 27.09 |
| Graduate of four-year college | | 14.36 | 15.03 |
| Beyond college but no grad. deg. | | 3.89 | 5.06 |
| Graduate or professional degree | | 14.47 | 10.77 |
| % whose family income during h.s. is: | | | |
| Less than $6,500 | | 9.47 | 5.91 |
| $6,500-$15,000 | | 25.98 | 27.42 |
| $15,000-$25,000 | | 34.27 | 34.78 |
| More than $25,000 | | 30.29 | 31.89 |
| % with location of h.s. in: | | | |
| Large city | | 31.60 | 14.14 |
| Suburb of large city | | 36.33 | 33.09 |
| Other city or town | | 25.06 | 36.28 |
| Farming community | | 7.01 | 16.49 |
| GRE Verbal | Mean | 480.16 | 510.27 |
| | S.D. | 118.26 | 107.97 |
| GRE Quantitative | Mean | 582.40 | 534.03 |
| | S.D. | 128.56 | 123.38 |
| GRE Analytical | Mean | 523.15 | 533.09 |
| | S.D. | 125.05 | 117.00 |

Source: Goodison (1983)

Table II-14: Asian or Pacific Islander Doctorate Recipients, 1978-1979

| | APIs | | | | U.S.[1] |
|---|---|---|---|---|---|
| | U.S. citizen | Non-U.S. citizen perm. | Non-U.S. citizen temp. | total | Total |
| Total number | 424 | 673 | 1457 | 2593 | 31200 |
| Male (%) | 72.9 | 83.7 | 85.7 | 83.0 | 71.4 |
| Female (%) | 27.1 | 16.3 | 14.3 | 17.0 | 28.6 |
| Doctoral Fields (%) | | | | | |
| Physical sciences[2] | 18.2 | 24.8 | 23.0 | 22.7 | 13.8 |
| Engineering | 16.3 | 35.1 | 28.1 | 27.9 | 8.0 |
| Life sciences | 24.8 | 18.1 | 19.4 | 20.0 | 16.3 |
| Social sciences | 14.9 | 9.5 | 13.5 | 12.6 | 20.4 |
| Arts & humanities | 10.6 | 4.0 | 3.4 | 4.9 | 13.3 |
| Education | 12.5 | 4.8 | 8.8 | 8.3 | 23.6 |
| Professions & other[3] | 2.8 | 3.7 | 3.8 | 3.7 | 4.6 |
| Median age at doctorate | 32.7 | 31.4 | 31.3 | 31.4 | 31.9 |

1. Includes 3,574 foreign students.
2. Includes mathematics and computer science.
3. Includes business administration, theology, social work, library science, and other fields.

Source: National Research Council (1980)

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Table II-15: Asian or Pacific Islanders and Professional Degrees Conferred, 1978-1979.

| Major | Total | % of total degrees | Female | Male |
|---|---|---|---|---|
| Dentistry (D.D.S. or D.M.D.) | 194 | 3.5 | 36 | 158 |
| Medicine (M.D.) | 369 | 2.5 | 108 | 261 |
| Optometry (O.D.) | 13 | 1.2 | 0 | 13 |
| Pharmacy (D. Phar.) | 112 | 17.5 | 42 | 70 |
| Podiatry (P.O.D. or D.P.) | 7 | 1.2 | 1 | 6 |
| Veterinary Medicine (D.V.M.) | 10 | .6 | 1 | 9 |
| Chiropratic (D.C. or D.C.M.) | 20 | 1.1 | 2 | 18 |
| Law, general (LL.B. or J.D.) | 390 | 1.1 | 139 | 251 |
| Theological professions | 45 | .7 | 4 | 41 |

Source: Office for Civil Rights (1981)

Table II-16: Years of School Completed by Individuals 25 Years Old and Over, 1980

| | Total | Elementary | | | High school | | College | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 0-4 years | 5-7 years | 8 years | 1-3 years | 4 or more years | 1-3 years | 4 or more years | % of college grads. |
| Male | | | | | | | | | |
| API | | | | | | | | | |
| Chinese | 246,847 | 17,843 | 17,729 | 7,404 | 18,185 | 42,433 | 35,156 | 108,097 | 43.8 |
| Filipino | 206,408 | 16,692 | 15,385 | 5,143 | 18,340 | 40,033 | 44,375 | 66,440 | 32.2 |
| Indian | 118,819 | 2,284 | 2,519 | 2,506 | 6,015 | 10,702 | 13,456 | 81,337 | 68.5 |
| Japanese | 204,598 | 3,774 | 5,705 | 8,042 | 14,708 | 61,306 | 39,135 | 71,928 | 35.2 |
| Korean | 71,381 | 1,156 | 1,522 | 978 | 3,504 | 14,865 | 11,971 | 37,385 | 52.4 |
| Vietnamese | 49,749 | 3,102 | 3,566 | 1,615 | 6,002 | 13,677 | 12,727 | 9,060 | 18.2 |
| Guamanian | 6,704 | 272 | 476 | 340 | 841 | 2,782 | 1,397 | 596 | 8.9 |
| Hawaiian | 38,917 | 1,302 | 2,039 | 2,204 | 6,124 | 15,680 | 7,101 | 4,467 | 11.5 |
| Samoan | 7,514 | 350 | 427 | 347 | 1,454 | 2,920 | 1,283 | 733 | 9.8 |
| Other | 41,632 | 4,170 | 2,786 | 1,086 | 2,888 | 6,784 | 8,897 | 15,021 | 36.1 |
| Total API | 992,569 | 50,945 | 52,154 | 29,665 | 78,061 | 211,182 | 175,498 | 395,064 | 39.8 |
| White | 53,941,163 | 1,507,020 | 3,257,197 | 4339,723 | 7315,405 | 17174006 | 8831,698 | 11516114 | 21.3 |
| Female | | | | | | | | | |
| API | | | | | | | | | |
| Chinese | 248,071 | 33,336 | 21,469 | 7,796 | 18,279 | 54,634 | 39,293 | 73,264 | 29.5 |
| Filipino | 239,504 | 14,734 | 19,840 | 5,875 | 19,221 | 40,777 | 40,329 | 98,728 | 41.2 |
| Indian | 119,865 | 5,201 | 7,256 | 7,293 | 14,394 | 24,490 | 18,662 | 42,569 | 35.5 |
| Japanese | 268,608 | 7,180 | 10,363 | 13,755 | 23,745 | 107,579 | 53,197 | 52,789 | 19.6 |
| Korean | 114,052 | 6,172 | 10,473 | 4,934 | 11,917 | 38,101 | 17,345 | 25,110 | 22.0 |
| Vietnamese | 52,986 | 7,492 | 7,343 | 2,792 | 6,940 | 16,391 | 7,862 | 4,166 | 7.9 |
| Guamanian | 6,906 | 389 | 632 | 375 | 1,040 | 2,771 | 1,184 | 515 | 7.5 |
| Hawaiian | 44,464 | 1,333 | 2,901 | 2,544 | 7,885 | 19,269 | 7,004 | 3,528 | 7.9 |
| Samoan | 7,393 | 536 | 568 | 455 | 1,647 | 2,786 | 1,044 | 357 | 4.8 |
| Other | 42,605 | 9,126 | 3,688 | 1,909 | 4,072 | 9,484 | 6,404 | 7,922 | 18.6 |
| Total API | 1,144,454 | 85,499 | 84,533 | 47,728 | 109,140 | 316,282 | 192,324 | 308,948 | 27.0 |
| White | 60349221 | 1489985 | 3374736 | 5051745 | 9348444 | 23610142 | 9432255 | 8041914 | 13.3 |

Source: Bureau of Census (1983b)

## PART III: INFLUENTIAL FACTORS

In this part, we propose that the educational characteristics of Asian Americans are a function of three major factors: (1) immigration and refugee policy; (2) amount of time devoted to learning; and (3) historical labor market discrimination and Asian American sensitivity to job openings under equal employment opportunity conditions.

### Immigration and Refugee Policy

The present immigration policy of the United States was legislated in 1965, when Congress enacted a bill which admitted 20,000 immigrants per country per year.[1] The law, which took effect in 1968, reversed nearly 80 years of exclusion of Asian immigrants. Not only did the new policy have a major impact on the size and ethnic diversity of the Asian American population as described in Part I, but it also influenced the educational characteristics of those admited. Since immigrants are a majority of Asian Americans, the educational characteristics of the overall population are similarly a function of immigration policy.

Asians first began to come to the United States in large numbers in the late 1840s, when Chinese came to California during the Gold Rush. In later years, other Chinese, Japanese, Filipinos, and a small number of Koreans also immigrated to the United States, mainly to the West Coast and Hawaii. They provided the manual labor that made possible the phenomenal economic growth of the American West. However, these early immigrants were also the targets of pervasive and ofter violent anti-Asian sentiment. Institutionalized discrimination included a series of national policies which at first restricted and then completely curtailed Asian immigration.

In 1882, Congress forbade immigration of Chinese laborers when it enacted the Chinese Exclusion Act. In 1907, the Gentlemen's Agreement curtailed the immigration of Japanese laborers. Then, in 1924, the National Origins Act excluded immigrants who were "aliens ineligible for citizenship." Since the right to apply for American citizenship had previously been denied Asian immigrants, this Act ended the immigration of all Japanese, Koreans, and Chinese. Because of their country's status as an American colony, the National Origins Act did not pertain to Filipinos. However, in 1934, the Tydings-McDuffie Act limited Filipino immigration to 50 per year. These measures, combined with other discriminatory legislation, including anti-miscegenation laws, and the fact that most Chinese and Filipinos had come to the United States as single males, had the effect of limiting the Asian population in the United States in size, social interaction, and political and economic opportunity.[2]

During the World War II years, Congress began to remove restrictions on Asian immigration and naturalization. In 1943, the Chinese Exclusion Act was repealed, possibly as a gesture of friendship towards China, an American ally during World War II. While the repeal finally made Chinese

immigrants eligible for American citizenship, it also contained a provision which limited Chinese immigration to 105 people per year. In 1952, Congress enacted the Walter-McCarran Act which allowed Japanese to immigrate and apply for citizenship, but restricted Japanese immigration to 185 per year.[3] The United States also began to admit Chinese refugees during this period. For example, when the People's Republic of China (PRC) was formed in 1949, a number of Chinese refugees who had supported the Nationalist Chinese government were permitted to come to the United States; and in 1962, 15,111 Chinese who had been allowed to leave the PRC gained entrance to this country as refugees. However, effective exclusion of Asian immigrants did not end until the present immigration policy was enacted in 1965.

Immigration policy has the dual objectives of reunifying families and increasing the supply of needed labor. Based on these objectives, wives and minor children of U.S. citizens are admitted on a nonquota basis; and the 20,000 slots allotted to each country are rationed between two groups: (1) other relatives of U.S. citizens and lawful resident aliens; and (2) professional and other workers needed by American employers.[4] Thus, the first cohorts of Asian immigrants admitted under this system consisted of relatives of Asians who had come here much earlier and skilled, highly educated workers for whom there were employment opportunities in this country. The first group, whose admittance was based on their relationship to relatives who came to this country primarily as unskilled, uneducated laborers from rural regions, probably came from lower socioeconomic backgrounds. The second group, by occupational definition, came from higher socioeconomic backgrounds. Over time, this dichotomy became less well defined as the relatives of the professionals and other skilled workers began immigrating under the family reunification categories. In short, the socioeconomic background of most present day Asian immigrants is likely to be middle class.

Contributing to this phenomenon are the Asian foreign students and recent Vietnamese refugees. A large number of Asians come to the United States for higher education and do not return to their homelands. Foreign students are typically subject to much higher tuition and fees than American residents, and they must be able to afford expensive transportation costs to and from their home countries and American universities. Further, their opportunity to earn income while enrolled in American schools is severely limited by the federal government. Thus, it is likely that most of these students are from relatively high socioeconomic backgrounds.

As indicated in Part II, the number of Asian "foreign student immigrants" in the United States may be substantial. To review, over 3,700 of those labelled Asian Americans who took the SAT in 1982-1983 attended high schools outside the 50 states and Washington, DC. In addition, in 1979, 56% of the 2,593 Asian doctorate recipients in the United States were holders of non-immigrant visas, and 37% of this group indicated that they intended to remain in this country for employment (National Research Council, 1980). Although foreign students are issued visas good only for the duration of their studies, many are able to change their status to immigrants with permanent alien resident status.

A substantial proportion of recent Indochinese refugees might also be categorized as middle class. Many of the so-called first wave Southeast Asian refugees, those who were admitted to the United States between 1975 and 1979, were from the elite class of South Vietnam. Among them were former government officials and scholars trained at prestigious universities in France.[5]

These first wave Vietnamese refugees, foreign student immigrants, professional and other skilled workers and their relatives undoubtedly contribute to the high proportion of the Asian American population with four or more years of college. They come to the United States having already obtained postsecondary educations in their home countries. For many, it is precisely because of their high level of training that the United states accepts them as immigrants. In other words, immigration and refugee policy--as opposed to any high innate ability among Asian Americans--has had the effect of inflating the college attainment of this population.

Further, a large body of work done by sociologists suggests that highly educated parents employed in professional and other skilled occupations are likely to influence their children in two ways. First, because of family socioeconomic status, the academic achievement of the children is likely to be relatively high. Second, because of the occupational status of their parents, the career preparation of the children is likely to be oriented towards professional occupations. While we do not believe that class background is the determining factor in a child's education and we are aware that the identification of an immigrant family's socioeconomic status is complicated by the phenomenon of the parents' initial downward occupational mobility after arrival in the United States,[6] we cannot ignore the strong influence of class status. Thus, we suggest there is a positive, intergenerational impact of immigration and refugee policy on Asian American preparation for college while in high school, on college attendance, and on choice of field of study.

In addition, immigration and refugee policy may be linked to the large standard deviations for the test scores described in Part II. To review, for every test described, the standard deviations of the Asian American scores were higher than those for whites, indicating a flatter distribution of scores among Asians than that manifested by the reference population. That is, while there is a greater proportion of high scores among Asian Americans compared to whites, there is also a comparatively greater proportion of low scores among Asian Americans. These low scores may be those of immigrant students from families with relatively low socioeconomic backgrounds. According to the 1980 Census, 14% of Asian Americans were living in poverty compared to 9% of the white population. Many so-called second wave Indochinese refugees, those admitted since 1979, come from rural, preliterate societies; it is estimated that 76% of this group of refugees are welfare dependent (Ford Foundation, 1983). It is also likely that the influx of immigrants who are related to early Asian immigrants who also come from rural areas has not yet terminated.

Finally, the high proportion of immigrants among the Asian American population means that most acquire English as a second language. This is undoubtedly a major factor contributing to the relatively low verbal test scores reported in Part II. Further, if mathematics is a universal language of sorts, then the non-English language background of immigrants is reflected in the tendency of Asian American students to concentrate on mathematics, resulting in high scores on mathematics tests.

The High School and Beyond data suggest that it is mainly recent immigrants, those who have been in the United States fo five years or less, who exhibit an imbalance in their mathematics and verbal test scores. Recent immigrants may also be overrepresented among the Asian American college students who major in biological sciences and engineering. This suggestion is borne out in part by Bagasao 1983), who found that Asian American high school students with five or fewer years of residence in the United States were more likely to plan "science careers" than Asian American students who had been in the country longer or who were American-born (Table III-1). "Science careers" were defined as careers in biological sciences, mathematics, physical sciences, engineering, computer and information science, and similar fields.

As indicated in Part I, the annual influx of Asian immigrants is quite large. Thus, attention to the educational needs of recent immigrants at all levels of the educational system must be on-going.

## Time Spent on Learning

Asian Americans appear to spend more time on learning than other high school students. Data from the High School and Beyond study show that, compared to white seniors, the Asian American seniors took one and one-half more years of the "new basic," that is, academic subjects; and a higher percentage of the Asian American sophomores spent five or more hours per week on homework (Table III-2). Asian Americans were also less likely than other students to be absent from school (Peng et al., 1984). While 26% of white sophomores were never absent, 45% of Asian American sophomores had perfect attendance. As the SAT data indicate, even among high school students who were all college-bound, Asian Americans reported they had 16.80 years of academic study compared to 16.32 for all students (Table II-8 in Part II).

The extra time Asian American high school students appear to devote to learning is probably related to their academic achievement and educational attainment. For example, Peng et al. (1984) found that the number of credits earned in high-level mathematics courses is the second best predictor for mathematics achievement (after previous mathematics achievement scores). Further, many of the reports on educational reform argue that academic learning time is an important factor in student achievement (see, for example, National Commission on Excellence in Education, 1983).

As to why Asian American students spend more time on learning than other students, a study by Stevenson (1983) suggests one possibility. In his longitudinal, comparative study of students in Taiwan, Japan, and the United States, Stevenson asked the mothers if luck, ability, or effort were the critical factor underlying their children's academic performance. Most Asian mothers chose effort, while most American mothers selected ability. The belief that achievement depends more on effort than ability may be similarly prevalent among Asian American parents and transmitted to their children. If so, the greater amount of time Asian American students spend on learning may represent extra effort expressly for the purpose of doing well. However, emphasizing the importance of effort is not particular to Asian culture. One of the reputed bedrocks of American culture is the belief that hard work leads to success. Stevenson's finding about American mothers' preceptions of the role of innate ability warrants further investigation.

The cost, if any, of extra time spent on learning among Asian Americans is unknown. That is, one might hypothesize that there is a trade-off between time spent on academic learning and time spent on student and community activities. Participation in extracurricular activities might be necessary to one's social and personal development in some way. The High School and Beyond study indicates that the percentages of Asian Americans who participated in sports, artistic activities, and community activities were lower than the figures for whites (Table III-3). In fact, the Asian American figures were lower than those for every racial/ethnic group in nearly every category of these three kinds of activities (Peng et al., 1984).

At the same time, Asian American high school students generally participated in "intellectual activities" at higher rates than other students. Twenty-one percent of Asian Americans were involved in student council and government, compared to 16% of whites. There was only a one percent difference between the percentages of Asians and whites who reported participation in school newspaper and yearbook activities. Since participation in student council, government, newspaper, and yearbook activities may be more closely associated with leadership, social interaction, and communication skills than with so-called intellectual skills, these figures suggest that Asian American students do not spend time on learning at the expense of pursuing other areas of personal development and accomplishment. Moreover, Asian Americans who took the SAT in 1982-1983 were more likely to have participated in social, ethnic, or community organizations than other SAT candidates (Ramist and Arbeiter, 1984). It does not appear, therefore, that Asian American time spent on learning entails the sacrifice of involvement in other student activities. However, an assessment of the cost in terms of stress, anxiety, and similar factors cannot be made.

## Historical Labor Market Discrimination and Asian American Sensitivity to Job Openings Under Conditions of Equal Employment Opportunity

Early Asian immigrants in the United States worked primarily in low-level manual labor jobs in agriculture and in the incipient urban-based industries of the West. These could be called "immigrant jobs," that is, low paying and low status jobs that domestic workers shunned. Upward occupational mobility was difficult. Unions, which act as gatekeepers for many types of jobs for skilled workers, have historically been unreceptive to immigrant workers. For example, the American Federation of Labor (AFL), organized in 1881 as a confederation of crafts unions, actively campaigned in favor of the 1882 Chinese Exclusion Act and the 1924 National Origins Act. Not surprisingly, the AFL also rejected Asian immigrants as union members. In 1903, for example, when Japanese immigrant sugar beet workers in California organized a union with their fellow Mexican workers, they applied to join the AFL. The AFL advised the Mexican workers that the sugar beet union would be admitted provided that it excluded Japanese and Chinese members. The sugar beet union declined to join the AFL under this condition.

Among employers, early Asian immigrants were welcomed as workers when there were labor shortages. However, when the shortages disappeared or if an economic recession appeared imminent, the immigrants were the first to suffer layoffs and other negative consequences. Thus, the jobs immigrants did secure tended to be of short-term duration and were dead-ends in terms of upward mobility.[8] Over time, Asian Americans seem to have developed a particular strategy to deal with employment discrimination and to secure upward mobility. This strategy has had an impact on their educational profile.

Beginning with World War II, when there was an economic boom in war-related industries and the first federal equal employment opportunity policies were adopted, second generation Asian Americans found new occupations open to them just as other minorities and women did. But because skilled, industrial, union jobs had long been closed to Asian Americans, Asian American youth sought employment in other sectors of the economy. There was a new, rising need for science- and engineering-trained workers and, perhaps because hiring appeared to be based on merit, Asian Americans began to enter these professional and technical occupations.[9] In order to qualify for these types of jobs, they invested in college. They faced few financial barriers in doing so; most Asian Americans lived then (and now) on the West Coast where an excellent postsecondary educational system is publicly financed.

Between 1940 and 1950, there was a threefold increase in the number of Chinese American males employed as professional, technical, and kindred workers (Lee, 1960). Although 110,000 people of Japanese ancestry were imprisoned during World War II, early releases were permitted for college attendance in the Midwest and East; and according to Kitano (1969), Japanese Americans were able to capitalize on professional job opportunities in the post-internment years.

These first entrants into professional and technical fields became role models for subsequent cohorts of Asian Americans who exhibited the same sensitivity to opportunities in professional fields during the Sputnik era and the present period of growth among high technology industries. Further, once the 1964 Civil Rights Act was passed, the more blatant forms of employment discrimination became illegal. All together, historical job discrimination, job market sensitivity, and equal employment opportunity policies appear to have encouraged Asian Americans to do well in school in preparation for college and subsequent careers in professional occupations.[10]

Summary

In this part, we have proposed that immigration policy, time spent on learning, and historical labor market discrimination and Asian American awareness of subsequent labor market opportunities under equal employment opportunity conditions are major influences on the educational characteristics of Asian Americans. We recognize, however, that if one focuses on a particular Asian American population, the three factors together may not contribute to a compelling explanation of their educational characteristics. For example, we are aware that current immigration policy does not have a large impact on the Japanese American educational profile, and we are unsure of the influence of past job discrimination on ethnic groups, such as the Vietnamese, who have little history in the United States.

However, even for Japanese Americans, we suggest that the concept of the stock of immigrant human capital is valid, albeit for a different time period. In the 1800's, when Japanese began to immigrate to this country, Japan had a compulsory educational system. Four years of schooling were required; four additional years were optional. Kitano (1969) maintains that the average Japanese immigrant therefore had eight years of schooling. Compared to Chinese and Filipino immigrants and possibly to the average American at the time, the educational background of Japanese immigrants was extremely high. It is not inconceivable that this human capital was an important factor in the upward mobility of subsequent generations.

Further, regardless of the effect of historical hostility towards Asian Americans on new Asian American ethnic groups, we contend that even recently arrived refugees appear to be quite sensitive to labor market shortages when making decisions about education and employment. Since sectors of the economy where workers tend to be unionized are declining, Vietnamese and other Indochinese refugees seek training for jobs in other areas.

We suggest that time spent on learning and awareness of employment opportunities are particularly important aspects of our explanation. Not only may they be valid for all ethnic groups of Asian American students, but they are also variables which the educational system can influence with respect to students of other racial and ethnic backgrounds. Time spent on learning can be increased, particularly if business, education, government,

and other leaders verbalize and show by example the relationship between effort and achievement in school, work, community service, and other activities which contribute to the quality of life. Greater awareness of work options and the preparation needed for employment might be fostered through more counseling and guidance programs and closer relationships between schools and businesses.

Last, we note that many students other than Asian Americans are immigrants or children of immigrants. A productive approach to assessing and facilitating their educational progress might be one which includes greater attention to the effects of immigration history, immigration policy, and immigrant human capital.

Table III-1: Career Plans of High School and Beyond API Seniors

| Length of residence | Science Career (n = 102) % | (n) | Non-science Career (n = 102) % | (n) |
|---|---|---|---|---|
| U.S. born and raised | 40.0 | (46) | 60.0 | (69) |
| Foreign born resident of U.S. 6 yrs or more | 50.9 | (20) | 49.1 | (15) |
| resident of U.S. 5 yrs or less | 66.7 | (36) | 33.3 | (18) |

Source: Bagasao (1983)

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Table III-2: Time Spent on Learning by High School and Beyond Students

| Racial/ethnic group | Credits earned in all subjects | Credits earned in new basics only | sophomores spending 5 or more hrs per week on homework |
|---|---|---|---|
| Asian | 22.6 | 14.7 | 46% |
| White | 21.9 | 13.2 | 29% |
| Black | 21.1 | 11.9 | 25% |
| Hispanic | 21.7 | 11.7 | 16% |
| American Indian | 21.3 | 11.2 | 22% |

Note: One credit is earned for a one year course. The new basics are English, mathematics, science, social studies, foreign language, and computer science.

Source: Peng et al. (1984)

Table III-3: Percentages of High School and Beyond Students who Participated in Selected Extra-curricular Activities.

| Extracurricular activities | Asian-Pacific | White |
|---|---|---|
| Sport activities: | | |
| Varsity athletic teams | 30 | 34 |
| Other athletic teams | 37 | 40 |
| Artistic activities: | | |
| Debating or drama | 9 | 13 |
| Band or orchestra | 13 | 14 |
| Chorus or dance | 15 | 18 |
| Intellectual activities: | | |
| Honorary club | 28 | 17 |
| School newspaper, yearbook | 18 | 19 |
| Subject-matter clubs | 26 | 20 |
| Student council, government | 21 | 16 |
| Community activities: | | |
| Vocational education clubs | 7 | 22 |
| Community youth organization | 10 | 16 |
| Church youth group activities | 27 | 35 |
| Junior achievement | 9 | 4 |

Source: Peng et al. (1984)

## PART IV: CONCLUSION

This paper has focused on the educational characteristics of Asian American secondary and postsecondary students. After examining background demographics and information from six national data bases, three factors were suggested which may account for the trends in the data. Their possible implications were discussed.

From the start, the paper was handicapped by the scarcity of national data on the present population of Asian Americans. In addition, nearly all of the data sets which include Asian Americans have limitations. Future surveys and studies need to use a standard racial definition of Asian Americans, preferably the 1980 Census descriptor. In addition, data on ethnicity, nativity, best language, and length of U.S. residence should be uniformly collected. Oversampling must be done to ensure that subsample sizes for Asian American students are adequate, and information on non-American students in foreign countries and foreign students in the United States should not be combined with data on citizens and immigrants. It should be standard practice for the Census Bureau to compile and issue a special report on Asian Americans by ethnic group after each decennial enumeration. Such a report was issued by the government after the 1970 Census, but no analysis has yet been done of the 1980 Asian American data. Further, the government, in its annual Condition of Education reports compiled by the National Center for Education Statistics, must begin focusing attention on Asian American students.

The available data suggest that Asian American students, with the exception of recent immigrants and others whose best language is not English, are doing well. We have suggested three factors which explain the educational characteristics of Asian Americans; however, studies need to be done to test specific hypotheses. The findings may have implications for the improvement of the education of other students.

Immediate attention must be given to the education of recent immigrants and others whose best language is not English. As stated previously, both secondary and postsecondary students appear to have difficulties in verbal skills and in areas dependent on a high level of English reading comprehension. These difficulties appear to narrow their options for study and career preparation.

Last, we have no current information as to the educational status of specific groups of Asian American students, whether by ethnicity, nativity, length of U.S. residence, geographic location, grade level, or school. Past analyses of the socioeconomic status of Asian Americans indicate that critical differences may be revealed when such variables are considered. For example, Chiswick (1983) found that native-born Chinese American males had the same economic return to eduction as their white counterparts when he analyzed national data from the 1970 Census. That is, education significantly boosted the earnings of both racial groups. In contrast, after analyzing the 1970 Census data for California alone, Jiobu

(1976) found that native-born Chinese American males had a lower economic return on their education than their white counterparts did, and that the economic return on the education of the Chinese Americans was not statistically significant.[1] Thus, studies of particular groups of Asian American students are needed. Longitudinal studies would be especially worthwhile, as it could be possible to track the educational transitions of immigrant students as they reside longer and longer in the United States. Astute researchers might be able to identify critical turning points. A better understanding of the education of Asian Americans would benefit not only their schooling but the schooling of others as well.

## FOOTNOTES

### Part I

[1]For information about the education of one group of Pacific Islanders, Native Hawaiians, see Kamehameha Schools (1983).

[2]A small increase is also due to the inclusion of Asian Indians among Asians and Pacific Islanders. In 1970, Asian Indians were classified as whites by the Census Bureau.

### Part II

[1]In 1974, Chinese-speaking students sued the San Francisco Unified School District for not providing appropriate instruction in the case of Lau v. Nichols. The Court ruled in the students' favor.

### Part III

[1]The 97th and 98th Congresses considered major changes in immigration policy as embodied in the Simpson-Mazzoli bill. In the 98th Congress, the House and Senate approved different versions of the bill but were unable to pass a compromise version.

[2]Coolidge (1969), Ichihashi (1932), Lasker (1969), Sandmeyer (1973), Chuman (1976), and many others have written about these early years of Asians in America.

[3]The federal government distinguishes between refugees and immigrants. The former are admitted on an emergency basis due to the fact or likelihood of their being persecuted in their native country. The United States has generally admitted refugees under separate legislation from that pertaining to immigrants.

[4]Taiwan and China shared a one country quota until January 1, 1982, when Taiwan was allotted an independent share of visas. Those 18 years or older who were born in Hong Kong are excluded from the per country limit; their immigration is determined by a colonial quota. Between 1965 and 1976, this quota was 200 per year. In 1976, the number was raised to 600 per year. There are six preferential categories of immigrants, each with a percentage of visas of which no more than 270,000 total are to be issued annually:

a. First preference: unmarried sons and daughters of U.S. citizens (20% of the visas);

b. Second preference: spouses and unmarried sons and daughters of lawful resident aliens (26%);

_____c. Third preference: members of the professions, scientists and artists and their spouses and children (10%);

d. Fourth preference: married sons and daughters of U.S. citizens and their spouses and children (10%);

e. Fifth preference: brothers and sisters of U.S. citizens and their spouses and children (24%);

f. Sixth preference: skilled and unskilled workers in occupations for which labor is in short supply in this country and their spouses and children (10%).

Unallocated visas from higher family preferences "fall down" to lower family preferences in sequence. Wives and minor children of U.S. citizens are exempt from the preference system. This information was taken from a report by the U.S. Commission on Civil Rights (1980).

[5]Similarly, many of the Chinese refugees admitted to the United States after 1949 were former Nationalist Chinese government officials and scholars.

[6]For information about downward occupational mobility among immigrants, see Chiswick (1977) or North (1978).

[7]These figures may be invalid. See Part II.

[8]Saxton (1971) and Jacobc et al. (1971) are among those who have written about early Asian workers in the United States; King and Locke (1980) and others have analyzed the historical segregation of this population in service jobs.

[9]It was also during the postwar years that the California state policy requiring the segregation of "Mongolians" in separate schools was formally abandoned (Wang, 1972). This policy was enacted by the legislature in 1860. Thus, the quality of schooling for Asian Americans may have substantially improved during this period.

[10]It is also the case that some first generation Asian Americans became self-employed owners of small businesses as a means of circumventing job discrimination. Light (1972) has documented the phenomenon of ethnic enterprise among early Chinese and Japanese immigrants. Sowell (1983) states that the educational attainment of Asian Americans is related to the financial ability of these entrepreneurs to send their children to college. For several reasons--the low cost of higher education in the West, the high failure rate among small businesses, the unknown extent to which Asian Americans have chosen self-employment--we do not have confidence in this argument.

Part IV

[1]This paper does not focus on the relationship between Asian American educational attainment and earnings. A cursory examination of 1980 census data indicates that college-educated Asian and Pacific Islander males earn less than their white counterparts in general and in the occupational groupings of: (a) engineers, architects, and surveyors; (b) lawyers and judges; (c) health diagnosing occupations (that is, doctors, dentists, etc.); and (d) postsecondary teachers. These lower earnings are a matter of concern; however, the subject must be examined in another paper.

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